THE VETERINARY RECORD

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The Council Election.

Two changes have taken place in the list of candidates for the Council. During the past week Mr. James Fraser, whose nomination for re-election we noted a fortnight ago, has withdrawn his name from the list of candidates, and another new candidate has been nominated in the person of Mr. J. Clarkson, of Garforth.

Hitherto the prospect of the election was very open; it becomes more so by the withdrawal of one old member whose re-election would have been practically certain, and the appearance of a new candidate whose claims for office are undeniable The election must result in the introduction of some new blood to the Council, and a fair number of likely candidates are now available, while fresh additions are still possible. Wednesday next is the last day for the receipt of nominations.

Infection in Tuberculosis.

Old classic theories often die hard, and it is not surprising that the inhalation theory of tuberculosis should be slow of eradication. Very many medical men at this moment, and not a few veterinary surgeons, still believe that the most frequent portal of entry of the tubercle bacillus into the system is the respiratory tract. Nevertheless, evidence in favour of the theory of infection by ingestion is steadily accumulating, and its influence is now very apparent. No present advocate of the inhalation theory who has followed the experimental results of the last few years denies that ingestion is a much more frequent method of tuberculosis infection than was formerly believed. Not a few former believers in infection by inhalation now accept ingestion as the more common method.

One recent piece of evidence in support of ingestion comes from Charlottenburg, where, from a systematic examination of the teeth and buccal deposits of school children, it appeared that the tubercle bacillus is not rarely found in the human mouth. No exhaustive account of these observations has yet appeared in England, but they will almost certainly form the starting-point for a series of investigations which will, we think, afford additional proof of the preponderating importance of ingestion in infection. That even exclusively pulmonary tuberculosis may arise from ingestion is now undoubted; and though there is still difference of opinion as to the frequence of such an occurrence, the whole trend of modern research in one direction.

Longitudinal Intra articular Fracture of the Lower Extremity of the Femur in a Horse.

Auger (*Journal de Méd. Vét. de Lyon*) records the following case in a half-bred mare. The animal, though aged, was still very vigorous, and ran away while yoked to a light vehicle. During her course, her hind-quarter collided violently with the angle of a wall; she stopped almost at once, became extremely lame, and was brought back to the stable with great difficulty.

The animal was brought to the Veterinary School, her face was anxious, and expressed intense suffering. The left hind limb was half-flexed, only just touching the ground with the toe; the region of the stifle showed a contused wound, and was very sensitive. No abnormal mobility of the limb was present, and palpation did not reveal fracture of the patella. Careful alternate abduction and adduction of the limb did not reveal crepitation, which became, however, distinctly audible when the limb was moved slowly backwards and forwards, with the ear approaching the articulation or actually applied to the stifle. Intra-articular fracture, probably of the lower extremity of the femur, was then diagnosed, and the mare was therefore destroyed.

Post-mortem, a hæmarthrosis of the femoro-tibio patellar articulation was found; and when the blood-clots were removed, a longitudinal fracture of the lower end of the femur was revealed. The internal condyle and the internal lip of the trochlea formed a single mass completely separated from the rest of the bone. The course of the fracture was absolutely regular, as if the bone had been severed with a saw. The fractured portion remained in contact with the principal part of the femur by means of the ligaments, the lateral ligaments, and the crucial ligaments, although injured, were not completely ruptured. The internal semilunar cartilage was also damaged.

The author adds one or two remarks upon the symptomalogy or the case. The sole diagnostic feature—apart from signs of pain or helplessness which are common to fractures of all parts of the femur—was the crepitation, which was only perceptible when the limb was being moved in a direction parallel to the long axis of the body; the longitudinal course of the fracture appears to explain this peculiarity. The absence of abnormal mobility of the injured limb is easily comprehensible for only the internal part of the lower end of the femur was detached, and thus the continuity of the length of the bone was not destroyed.—(*Annales de Méd. Vét.*)

W. R. C.

The Rectal Temperature of Healthy Cattle.

Weber reports (*Deutsche Tier. Woch.*) the result of extensive observations upon this question, which may be summarised as follows:

The bovine rectal temperature rises after eating, the average rise being 0·45 F. The essential factor in determining the degree of elevation in individuals is the muscular activity involved in eating. Draughts of cold water do not influence the rectal temperature in cattle; neither does milking. Brisk movement for a quarter of an hour causes a rise in temperature averaging 0·9 F.

The rectal temperature of the cow rises during pregnancy—at first slightly, but very markedly during the last month of the period. The average rise during pregnancy, taking the evening temperature as a basis, is 1·6 F. This high temperature begins to fall—suddenly, markedly, and continuously—from fifty-two to fifteen hours (twenty-eight hours on an average) before calving. During the hours and days following parturition, the temperature, under normal circumstances, shows a slightly undulatory movement, due to absorption of katabolic products.

During the final period of advanced pregnancy in the cow, the frequency of the heart is greatly accelerated.

The daily fluctuation of the temperature in the cow is less in animals fresh in milk than in those advanced in pregnancy. The former show a maximum range of temperature of 1·6 F., with an average of not quite 1 F. In the latter, the maximum is just over 2 F., and the average 1·4 F.

The average temperature of non-pregnant cows is from 100·4 F. to 103·1 F. In cows advanced in pregnancy, temperatures of from 103·1 F. to 104·9 F. in the absence of symptoms of illness, are physiological.

Healthy cattle under six months old may, in rare cases, show temperatures as high as 104.

In estimating the significance of the bovine temperature, it is therefore necessary to pay due regard to the time and circumstances of its observation. —(*Berliner Tier. Woch.*)

Bovine Pulmonary Sarcoma—Clinical Similarity to Tuberculosis.

Wyssmann (*Schweizer Archiv. für Tierheilkunde*) reports the case of an eighteen-year-old cow, which showed emaciation, poor appetite, and diminution of milk. Clinically she was suspected of tuberculosis, the grounds for this being a slightly febrile condition, tumour formation with sensitiveness to pressure on the right knee-joint, accelerated respiration, heightened vesicular murmur, and pain upon thoracic percussion.

The cow was slaughtered, and all the internal organs were found healthy, except the lungs. The latter were œdematous, and filled with yellowish-white, sharply circumscribed, prominent nodules ranging from the size of a hazel-nut to that of an apple. Upon section they were found to be homogeneous, their tissue being whitish, marrowy, and juicy. The pleura showed no special abnormality. The bronchial lymphatic glands ware the size of eggs, with a total weight of 200 grammes (approximately 7oz.); upon section, their surfaces were very moist, and very soft at the centres. The middle portion of the ninth right rib showed a flat, roundish swelling, which was composed of a grey bacon-like tissue, juicy, but firm in consistence. A precisely similar bony lesion, which had been apparent during life, was found on the right knee-joint.

Microscopic examination of the lesions of the lung, the bronchial lymphatic glands, and the rib, showed that all were sarcomata of the small round-celled variety. The lesion on the knee was not examined microscopically.—(*Berliner Tier. Woch.*)

Cæsarean Section in the Bitch.

Schimmelpfennig, after removing a dead pup from a valuable dachshund with the forceps, found it necessary to perform cæsarean section to remove a second pup remaining in the uterus. The operation was successful, and healing took place by first intention.

At a subsequent parturition of the same bitch, cæsarean section was again necessary; and in performing it it was found that the silk sutures used to suture the muscles in the first operation had become encapsuled in a considerable mass of fibrous tissue. This time the uterus, peritoneum, and abdominal muscles were all sutured with catgut, silk being employed for the outer skin alone. Healing again followed by first intention.—*Berliner Tier. Woch.*

The Odour of Goat's Flesh.

According to Rost, the characteristic odour of the flesh of the uncastrated he-goat really proceeds solely from the skin. When it affects the flesh it only impregnates the superficial portions, and this is due either to direct contact with the skin, or to indirect contamination from the same source by means of the butcher's hands.

Zeeb, after an experience of six years as director of the Offenbach Abattoir, during which time he has examined more than 500 he-goats of all ages, fully confirms this view (*Zeitschrift für Fleisch und Milch hygiene*).—*Annales de Méd. Vét.*

DISEASE IN CANARIES.

By J. A. Gilruth, M.R.C.V.S., F.R.S.E., Professor of Veterinary Pathology, Melbourne University (late Chief Veterinarian.) From Annual Report, 1909, Div. of Vet. Sc: Dept. of Agric: New Zealand.

From Christchurch last summer a peculiar disease affecting certain aviaries in the city was reported by a noted breeder of prize birds who forwarded the body of one for examination.

History.—The history supplied was meagre. For some days an affected bird would appear drowsy, disinclined to eat, and preferring to rest on the bottom of the cage rather than perch, There was no diarrhœa or other definite symptom exhibited. Death generally occurred within a few days of illness first being observed, but frequently no symptoms were noticed, and occasionally again the animal would linger for much longer than the average period.

Post-mortem examination of the bird received disclosed no pathological condition further than a very enlarged and pulpy spleen, which measured an inch in length.

Microscopical examination of the blood and the spleen demonstrated some long sporulating bacilli and a number of short bacilli staining bipolarly. These were isolated: the former proved to be, as anticipated, putrefactive, and the latter was found to be pathogenic for rabbits, guinea-pigs, mice, and pigeons, but not for ordinary fowls. Later on a cage was received from Christchurch containing three canaries; this was one of the cages in which a considerable mortality of canaries had occurred. It had been cleaned out, but probably not thoroughly disinfected. The three canaries sent in the cage had not been in contact with any diseased birds, nor in any premises where there had been a noticeable mortality. One was observed rather drowsy on arrival, but no other symptoms were exhibited. Next day the dullness had increased, while the repirations were slightly accelerated. This condition continued for twenty days after arrival, when the bird was found dead one morning in the cage. Post-mortem exhibited nothing abnormal. There were a few bacilli in the blood, these being apparently similar to those previously isolated. That the bacillus was the same was proved by subsequent experiments.

Characteristics of Bacillus.

A facultative anærobe, very irregular in length, varying from almost a coccus to the length of *B. typhosus*, often in pairs, motile, staining bipolarly, and Gram negative.

On agar the colonies are large, circular, with smooth edges and raised nipple-like centre, greyish-white and moist-looking. In streaks the growth is broad, raised in the middle, with fairly regular edges, which tend, however, to send off shoots.

On gelatine at 22° C. it grows readily, the appearance being similar to that on agar, but the edges of the growth are smooth. There is no liquefaction.

Broth (neutral) becomes rapidly cloudy, but no scum and little deposit is observed, the cloudiness being very uniform.

On serum the growth is not marked, and is not special. Milk is not curdled, although the bacillus grows readily in this medium, but being quite spherical in shape. Neutral-red is completely decolorised, in shake agars within forty-eight hours and in broth within twenty-four hours, the surface of the neutral-red broth showing a greenish-yellow tinge.

In glucose, saccharose, dulcite, and mannite media the growth is luxuriant. In the broth there is a very dense growth, much more opaque than than on ordinary peptone broth. In the agar, as in shake cultures, there is evolution of gas, and a distinct alkaline reaction, especially with saccharose.

On potato there is a thin, almost invisible growth, which can only be demonstrated by scraping with the needle.

Indol is not formed. It will be noted, therefore, that the bacillus does not belong to the coli group.

Experiments on Animals.

Fowls.—Two were inoculated, one being an old rooster, with 1 c.c. of broth; the other, a young but adult fowl, with ½ c.c. Both remained normal, showing no swelling or evidence of discomfort.

Pigeons.—Five were inoculated with doses of broth culture varying from 0·25 to 0·5 c.c. Two which received 0·25 c.c. died within twenty-four hours; one which received 0.25 c.c. died in forty-eight hours; one receiving 0·5 c.c. died in forty-eight hours; and one receiving 0·25 c.c. in three days.

Post-mortem showed little swelling at the seat of inoculation beyond necrosis of the adjacent muscles, which were pale and friable. The internal organs were normal, but for the heart, which in the majority of cases showed blood-extravasation of considerable extent around the auricles.

Microscopical examination of material from the region of inoculation showed enormous numbers of bacilli, but the blood contained very few, frequently only one or two being visible in one field af the microscope.

Rabbits inoculated with broth cultures in doses of ½ c.c. and under succumb in from two to five days. There is little or no œdema at the seat of inoculation, but occasionally slight hæmorrhage subcutaneously. The muscles at the seat of inoculation are swollen and very pale. The internal organs are normal in appearance, the spleen only being sometimes slightly enlarged.

Guinea-pigs inoculaied with 0·5 c.c. broth cultures die in four to five days, the post-mortem appearances being similar to those of rabbits, with sometimes a caseous adhesive deposit underneath the skin at seat of inoculation.

Mice inoculated with one drop of broth culture succumb in four to five days, with little pathological change beyond slight œdema at the seat of inoculation, a small quantity of peritoneal effusion, and an enlarged and pulpy condition of the spleen.

Microscopic examination shows many bacilli at the seat of inoculation and in the peritoneal fluid, but extremely few in the blood, spleen, and elsewhere.

Canaries.—One inoculated with one drop of broth culture exhibited no symptoms beyond a slight drowsiness during the last forty-eight hours of life, and was found dead on the morning of the fifth day. There was no swelling at the point of inoculation, but the adjacent muscles were pale and necrosed. Beyond a slight enlargement of the spleen, all internal organs were normal. Examinations of smears showed numerous bacilli at the seat of inoculation, but extremely few in the blood and spleen—so few that rarely more than one or two could be observed in one field of a blood film.

Another canary, a very old bird, was inoculated with a similar dose, but beyond a passing dullness from which recovery was rapid, no effect was observed.

Unfortunately, no further information could be obtained regarding the epidemic amongst the canaries, as those we secured were only sent about the end of the outbreak. There appears little doubt, however, about the contagious nature of the disease, and that the cause was the bacillus which proved so virulent for nearly all the animals inoculated, with the exception, curiously enough, of barnyard fowls.

A NOTE ON COWPOX IN MAN; WITH A REPORT OF A RECENT CASE.

By Robert W. Cruickshank, M.B., C.M.,
Eynsham, Oxon.

The first distinct description of cowpox was given by Jenner when he published *An Inquiry into the Causes and Effects of the Variolæ Vaccinæ, a Disease Discovered in Some of the Western Counties of England, and known by the Name of the Cow Pox* (London, 1798). The disease is described as consisting of "irregular pustules on teats, of a palish blue colour surrounded by an erysipelatous inflammation, and characterised by a tendency to degenerate into phagedænic sores." The communication of the disease to man was no doubt fairly common for a considerable period before the above treatise was written.

"The gossip among cowherds of the vague, obscure, but popular belief regarding the possible communication of this disease to the milkers, and the protection

from small-pox which this conferred, was the source which first attracted Jenner's attention."

One finds that Jenner cited a number of instances of accidental inoculation occurring on the fingers, hands, wrists, arms, and on the lips. Pearson also cites cases, mostly on hands and arms. One of his cases is, I think, of special interest.

"Annie Francis had pustules on her hands from milking cows affected. These pustules soon became scabs, which, falling off, discovered ulcerating and painful sores, which were long in healing, Some milk from one of the diseased cows having spurted on the cheek of her sister and on the breast of her mistress, produced, on these parts of both persons, pustules and sores similar to her own on her hands."

The two latter cases seem to me to be open to the question whether the milk from the animal suffering from cowpox was the infecting source, or whether the fingers of the originally infected case were the immediate inoculating factor.

I was talking to a cowman in a large dairy farm about cowpox recently, and he informed me that some years ago he was himself infected, chiefly about his finger nails, and that during the course of the disease (to put it in his own words) "he was acting about with his missus one day, and accidentally scratched her forehead." About a week later the disease appeared at the site of the scratch; papule, pustule, and scab followed, with considerable constitutional disturbance. The woman bears a large white, silvery cicatrix at the present time. Cases were reported, and a careful description of the disease in the cow given, by Ceely in 1838, 1840, 1841, 1845. Other outbreaks were discovered in 1857, a full description of them being given in Professor E. M. Crookshank's book, *Bacteriology and Infective Disease*. Mention is also made of outbreaks in Italy, France, Germany, Holland, Denmark, Russia, and in North and South America. In December, 1887, in Wiltshire, Prof. Crookshank investigated and described several cases. In June, 1888, Mr. Forty reported cases in Gloucestershire, and in 1894 Mr. Bucknill reported a case in a milkman.

The author then describes in detail a case of cowpox which he personally observed in a farmer, some of whose cattle had "breakings out on their teats," in North Berkshire last autumn.

After recovery the patient, who had been vaccinated as an infant thirty seven years before and had never been revaccinated, was vaccinated with reliable vaccine lymph.

Absolutely no reaction followed, though the efficacy of the lymph was attested by the fact that four infants —one being the patient's own child—were vaccinated by the same lymph and all gave typical reactions.

It is interesting to remark that the outbreak of cowpox occurred in a neighbouring county to Gloucestershire, where Jenner found his early cases. The farmer informed me that the outbreak among the herd of cows in North Berkshire in November, 1909, had been going on for about a month before I saw them. Out of 30 cows, 25 showed evidence of the disease on the teats and the base of the udder. Inquiry since showed that all the milch cows were affected. The pocks were multiple, and some, where the scabs had been knocked off, showed much inflammatory reaction, with sloughing and ulceration. The most marked differences in the cow and man were that in the vesicular stage the unbroken vesicles, of which I only found one or two, gave the idea of more fluid contents in the cow than in the man; most were broken, evidently from milking, the same slate-blue colour was evident, and they were discharging a sanguineous fluid.

The marked umbilication shown in the man in the scabbing stage was generally absent in the cow, and the scab was slightly convex to the surface of the teat; but there was the same formation of superimposed layers. According to the statement of the farmer and cowman, little constitutional disturbance was noticeable in the cows, and the secretion of milk was but slightly reduced. These remarks are only impressions roughly formed by inspecting a few of the cows on two occasions. The cattle being in the fields, only the more docile cows could be approached and examined. The photograph (taken on November 22nd) shows the udder and teats of one of the affected animals. I was unable to trace any other possible infections in man in this epidemic.

The farmer thought the first case occurred in a recently purchased cow. In reply to questions, he said that no disease was present among his farm or other horses (grease). He had changed his cowman and a milker shortly before, but neither had any sore places on their hands or elsewhere, as far as he knew.

The disease is said to be rare, but I am inclined to believe, from inquiries among a few dairy farmers and cowmen in my neighbourhood, that most have had outbreaks of the disease in their herds during the last ten or fifteen years. I also found that several men, in all probability, contracted the disease on their fingers or wrists, and in one case it was communicated by a cowman to his wife as before mentioned.

I am also impressed by the fact that though the results produced by accidental inoculation direct from a case of cowpox to the human being broadly go through the same stages as those produced by vaccine lymph, yet they differ in the appearances at the various stages, and probably run a more severe and protracted course. This may possibly be due to accidental introduction of organisms producing more intense inflammatory reactions, or the preparation of the lymph for vaccination may modify the activity, and thereby subdue the intensity of results obtained.

As this disease chiefly prevails in milch cows, and usually affects a whole herd, it should, I think, be made notifiable. For in process of milking the scabs are knocked off, and the contents of the vesicles are sure to contaminate the milk; the scabs and products of secondary inflammation and sloughing must also to some extent find their way into the milk, and the result of drinking such milk, should any small abrasion be present in the mucous membrane of the upper alimentary tract, raises some speculation. Dairy farmers' knowledge of this may perhaps partly account for the apparent rareness of the disease. If notification were made compulsory, and if the disease was confirmed by competent veterinary inspectors as likely injuriously to affect the use of the milk for human food, surely its sale ought to be stopped until danger had passed. As the disease is rare, probably insurance against its occurrence could be made at a trifling cost.—*British Medical Journal.*

ROYAL COUNTIES VETERINARY MEDICAL ASSOCIATION.

An ordinary general meeting was held on the afternoon of Friday, April 29, at the Clarendon Hotel, Oxford. Percy J. Simpson, F.R.C.V.S., Maidenhead, occupied the chair. There were also present: Messrs. A. L. Butters, London; R. J. Verney, Oxford; H. C. Jagger, Bicester; Fred. W. Thompson, Reading; R. Page-Bull, Deddington; John Varney, Winslow; S. H. Slocock, Hounslow; F. W. Hanks, Wantage; J. M. Hunt, Cholsey: L. Barnard, Chipping Norton; Geo. E. King, Abingdon; and R. G. Gillard, and G. P. Male (Hon. Sec. and Treas., members; and Messrs. Guy Sutton, London; Geo. R. Lamb, Bletchingdon; Louis Mitchell,

Reading; Chas. F. Parsons, Cheltenham; G. J. Jelbart, Stow-on-the-Wold; and E. Hume King, Abingdon, visitors.

Letters and telegrams apologising for inability to attend were announced from Messrs. E. J. Mellett, John Hatch, W. Shipley, R. Roberts, J. H. Wilson, R. C. Tennant, T. W. and H. G. Lepper, R. F. Wall, and F. G. Samson.

VETERINARIANS AND PUBLIC HEALTH.

The PRESIDENT reminded the members of the resolution proposed at the last meeting by Mr. J. C. Coleman, and carried, to the effect that members should approach their Parliamentary representatives with regard to the appointment of a Veterinary Officer at the Local Government Board to look after Public Health interests in connection with the transmission of diseases. He himself had been in communication with the Member for his Division of Berks. (Mr. Ernest Gardner), who wrote: "I am in sympathy with the object of the resolution, and will, as opportunity may offer, give it my support." (App). A copy of Mr. Coleman's resolution had been forwarded to the different Veterinary Medical Associations.

The HON. SEC. stated that he had received a few replies. One was from the Secretary of the Association of Veterinary Officers of Health, enclosing copy of a letter issued by that Association, which referred only to Scotland; and saying: "You can depend on our Association giving you all the assistance possible." The Secretary of the Scottish Metropolitan V.M.A. wrote: "The movement is being actively pushed in Scotland. My Society approve of the action taken, and I am sure that the resolution passed by your Society will receive the support of the members. The Lancashire V.M.A., the Veterinary Association of Ireland, the Southern Counties, and the Central V.M.A., had alse written expressing approval.

The PRESIDENT thought that was very satisfactory up to a point. They seemed to be getting support all round; and he hoped that the thing would be carried through. (Hear, hear.)

MEMBERSHIP.

The HON. SEC. read a letter from Major Cranford, Hounslow, who is going abroad, and another from Mr. H. G. Simpson, resigning membership of the Association; and these resignations were accepted with great regret, on the proposition of Mr. Jagger, seconded by Mr. Slocock.

Also letters were read from Mr. W. Western. It was hoped that he would reconsider his resignation.

Major C. B. M. HARRIS, D.S.O., A.V.S., who has succeeded Capt. Wright at the Arborfield, Berks, Remount Establishment, was elected a member of the Association, on proposition of the Hon. Sec.—The President seconded the proposition with great pleasure, and it was carried nnanimously.

PLACE OF NEXT MEETING.

On the proposition of Mr. Jagger, seconded by Mr. Varney, it was unanimously resolved that the next meeting of the Association be held at Aylesbury, on the last Friday in July.

POST-MORTEM SPECIMENS.

Mr. VARNEY showed a portion of ruptured ileum of a yearling colt. He stated that he could find no puncture in the abdominal walls, and no sign of suppuration. It had been suggested that the injury might have been caused by lightning.

Mr. G. E. KING exhibited the bladder of a spaniel dog that had been brought to him, and which he treated for calculi for some days without any hope of giving relief. When the animal died he found an immense number of calculi in the bladder, and four in the urethra. He also produced other specimens of calculi of great size which he had obtained from a two-year-old steer, the stones being in the bladder and urethra, and also in the kidney itself.

The PRESIDENT said it was very kind indeed of gentlemen to bring specimens forward at those meetings. With regard to the ruptured bowel, he would almost venture the opinion that some sharp substance had been at work. He remembered in the case of a foal finding a piece of wire running along the bowel, which had probably been at work for about ten days; but in that case there was an abscess. Mr. King's cases were very interesting. He thought it was almost unique to find a dog's bladder so full of large stones as the one they had seen. He had never known a case of calculi in a steer. He had a bull now which got a tremendous amount of hard, gritty concretions on the penis. It did not appear to have affected the animal's health, but he would like to hear of a remedy for it.

Mr. JELBART produced a specimen of *Strongylus tetracanthus* which he had found in Mr. Varney's specimen while examining it. He suggested that these worms were the cause of the rupture.

A hearty vote of thanks was accorded, on the proposition of the President, seconded by the Hon. Sec., to Mr. Varney and Mr. King for bringing forward such very interesting specimens.

ROARING IN HORSES.

By GUY SUTTON, M.R.C.V.S., Kensington.

Mr. Chairman and Gentlemen,—I do not intend to worry you with a long discourse on the anatomy of the larynx, or by describing the usual proceedings of surgical cleanliness. The subject of roaring has given rise to endless disputes and discussions, and probably will continue to do so. If we accept the general view that roaring and whistling are always due to recurrent laryngeal paralysis—and I am not quite sure we are right in doing so, it is still a fairly open question how this condition arises.

It is all very well to attribute it to the anatomical arrangements of the nerve passing around the aorta and its apposition to the thoracic glands, which, during illness, have become engorged or indurated, and now offer some amount of opposition to the proper transmission of nerve impulses. This theory probably has a large amount of truth in it, but only appears to operate in animals with predisposed tendencies to this failing. Ponies and cobs suffer from febrile complaints as readily as larger individuals, yet the percentage of such that make a noise is small. On the other hand most men can call to mind cases where animals have gradually commenced to "make a noise" with no perceptable illness.

The question of heredity is also very properly alleged to predispose to this unsoundness, and undoubtedly "like tends to beget like" in a marked degree where roaring is concerned. A large percentage of the stock of a roaring sire will have developed the malady before reaching seven years old. In the British Isles the thoroughbred is the greatest culprit, and he, with his near relations, the well-bred hunter and large bloodliffe carriage horse furnish by far the majority of our cases. Polo ponies, as a class, contain a large percentage of thoroughbred blood, but the number of roarers or whistlers is comparatively small, and even with hunters and carriage horses it is the larger individuals that are most often attacked.

Climate is another contributory cause, and I have heard that "making a noise" is rare in South America and Australia. The Americans did not fear to give £30,000 for Ormonde and use him in California. Climate is probably closely associated with the question

of housing. The animal inhabiting regions near the tropics leading a practically open air life, and in any case being spared the impure air of the ordinary stable.

When all these points have been considered as probable causes we still have the question of sex. Roaring is far more common in the horse than mare, and the percentage of cases is said to be higher in stallions than geldings, but it must not be overlooked that stallions are practically always fairly closely confined from two-year-olds.

Until recently I had the impression—and I believe it to be the general one—that the roarers always had a paralysed left arytenoid cartilage and vocal cord, with consequent atrophied laryngeal muscles on that side. During the last nine months I have had the opportunity of viewing the interior of the larynx in more than fifty "roarers and whistlers," and in quite a number, I should say about half, movement has been discernable in the left cartilage, sometimes to a far lesser degree than the right, and in other cases both cartilages have appeared to move equally. In these cases probably the nerve supply is sufficient for the movement of the larynx whilst at rest. When, however, the horse is extended or distressed, the nerve becomes fatigued, ceases to transmit its impulses perfectly, and paralysis ensues. These are possibly the horses that give rise to disputes when brought for examination.

Surgical interference for the relief of roaring has engaged the attention of many men during the last century, but few of the various operations have been practised to any extent, with the exception of tracheotomy, which, like neurectomy, has been described as the effort of the baffled surgeon. Certainly it is unsightly, uncleanly, and is frequently followed by annoying complications. To see a beautifully-modelled horse, a fine performer, with a tube in his throat always fills one with regret, and it is little wonder that numerous operations have been devised to obviate such a disaster.

The operation I wish to bring to your notice to-day is briefly described in Fleming's book as having been performed by the Gunthers early in the 19th Century. Why it fell into disuse it is hard to say, but I believe the same fate befel median neurectomy, which was held in disrepute for a number of years, but is now recognised as a most useful operation.

Within the last few years stripping the mucous membrane lining the ventricle of the larynx, and so attempting to procure a firm adhesion between the arytenoid and thyroid cartilage—the resulting cicatrix drawing the paralysed arytenoid and vocal cord to the side of the laryngeal lumen—has been revived in America with considerable success, and arytenoidraphy has also been tried very largely by Merrilat, and in England Mr. Sheather has operated successfully for this complaint.

In August last I had the pleasure of seeing Professor Williams, of Ithaca, U.S.A., perform on two hunters, and since then, with Prof. Hobday, have operated upon a considerable number of roarers with gratifying results. No man would suggest that every horse submitted to the ordeal will cease to make a noise. They will not. Some failures are to be expected in every operation, but the results will, on the whole, be most satisfactory. In some the noise will so diminish that from being bad roarers it will be most difficult to detect any abnormal sound.

Other cases occur in which the horse when hard galloped was in danger of choking, and will after operation still make some noise but be able to gallop on without inconvenience—a most desirable thing—and curiously, the noise appears to cease immediately the animal is pulled up.

The best cases for operation are, I believe, those animals which are so inconvenienced that the question of tracheotomy is discussed, then if the operation is completely successful it is indeed a triumph; and if not, tracheotomy may always be resorted to afterwards if necessary, but I sincerely believe the vast majority will be very much relieved, and the noise greatly diminished, and in quite a good proportion almost entirely disappear.

For the operation the horse is cast, and should be chloroformed, local anæsthesia, though practicable, having many disadvantages. The subject is placed upon its back with head extended, and the area of operation over the laryngeal region prepared. Surgical proceedure demands cleanliness, though no efforts will result in the operation being an aseptic one.

The skin and sub-laryngeal muscles are incised in the median line down to the thyroid cartilage. When bleeding has ceased the crico-thyroid membrane is split and the edges retracted. An incision is now made around the margin of the laryngeal ventricle, going just through the mucous membrane. The separated area is seized with forceps and carefully dissected out with the scalpel handle and finger. The larynx is swabbed if necessary to remove blood clots, the retractors removed and the wound left open.

The after treatment must ensure drainage, and the ordinary treatment of open wound. A muco-purulent discharge will persist for the next fortnight, but at the expiration of three weeks, if all has gone well, the wound will have closed and be marked by a comparatively small scar.

Secondary infections in this region are reported to be most serious, and pneumonia or empyema of the frontal sinus may readily be set up. The horse should do practically nothing for the next three weeks, and then have walking exercise of half an hour, increasing to one hour at the expiration of another four weeks. After two months from the date of operation he may be cantered a short distance, to relieve any anxiety in the owner's and operator's minds as to the result. It will certainly not be well to gallop or violently exert the horse until the third month has elapsed.

It is worth mentioning that many grunters fail to make their distinctive noise when threatened after this operation has been performed.

Discussion.

The President said he was sure they had all listened with great attention to Mr. Sutton's very interesting paper, and invited remarks on it.

Mr. Jagger asked if Mr. Sutton had yet had an opportunity of seeing in post-mortem a larynx that had been operated on. He (Mr. Jagger) saw two operations performed the other day by Prof. Hobday, and as far as he could see, if healing took place satisfactorily there must be a certain amount of new tissue formed between the two cartilages after the membrane of the ventricles had been removed. If that was so, he could see no room for doubt as to the future welfare of the horse if he were at first better after the operation. If it was successful at all he did not see why it should not be entirely successful in cases that went on without complications.

Mr. Sutton replied that he had not seen a post-mortem case.

The President said that as some of those present might not be returning to the hotel after watching the operations Mr. Sutton was about to perform, he would like to take that opportunity of proposing that they give that gentleman their collective hearty thanks for the trouble he had taken in preparing the admirable paper to which they had just listened, and in coming from London to read it and to perform the operations they were about to witness. Those demonstrations interested them very much, and from them they learned a great deal more even than they could from the reading of papers. (Hear, hear.)

The Hon. Sec., in seconding the motion, said that

some time ago he was left in a hole, not having a paper for that meeting. He mentioned the matter to Mr. Sutton, who most kindly undertook to help him in the way he had. (Applause.) He wished also to thank Mr. Varney, who had relieved him of a great deal of work by undertaking the arrangement of all the details.

The vote was passed by acclammation.

The company then made an adjournment to the spacious and well lighted riding school in Worcester Street, Oxford, where Mr. Sutton most successfully and skilfully performed the operation on three horses.

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

(Concluded from p. 722)

Fractures in the Limbs of Young Animals.

Mr. Munro: When Mr. Locke asked me to assist with something for this meeting, I thought probably a discussion could be got from such a subject as the treatment of fractures in the limbs of young animals. On looking over some of my old notes on cases I have treated I find that in July, 1885, I was called to see a three months old foal, and found that the metacarpal of the near fore-leg was broken about midway between the knee and fetlock joint. I had the foal laid upon its side and got the leg pulled straight, seeing that the toe of the foot and front of knee were in line with one another, then I applied plaster of Paris bandages. After the first bandage was applied I took some splints putting one in front, one at the back and one on either side of the leg, and then more bandages upon the splints. The foal was kept on his side until the plaster bandages were dry. The foal carried the leg very carefully not touching the ground with it, and union took place. In about three weeks the bandage was removed and fresh ones applied. The foal made a good recovery leaving no sign of lameness. I always adopt this treatment.

About ten years ago I was called to see a two-year-old heifer, lame. I found she had broken the tibia and fibula, about eight inches below the stifle joint; she was in poor condition and not worth slaughtering. I got the leg well pulled out and applied plaster of Paris bandages from above the hock right up the leg over the stifle. The loose box was cold and damp and the bandages did not set quickly, so I got some bricks made hot in a fire and placed them round the bandages which then dried well. The heifer made a good recovery.

Mr. Brittlebank was pleased to hear Mr. Munro's remarks in regard to the treatment of fractured limbs in animals. There could be little doubt that very many animals were needlessly condemned to slaughter, which if given a reasonable chance would recover. He had had to treat many cases of fracture, and would mention one which occurred some years ago in which there was an undoubted fracture of the tibia in a two-year-old colt. The treatment in this case was to apply as thick a pitch plaster as possible round the limb—with extremely satisfactory results: it being educative to see the way in which the animal himself nursed the leg.

The question of tuberculosis of the sheep having been mentioned, he could not help thinking that some of the evidence in regard to the extreme rarity of the disease was a little unreliable. He had seen three or four cases of tuberculosis in sheep, and in every case the animal had been hand reared. To mention one case only occurring in a year-old ram which had been got up for show purposes and had been given as much cow's milk as he cared to take, and ultimately developed abscesses in the neck. Practically every treatment was tried, all with equal lack of success. Finally the animal was destroyed, and post-mortem showed well-marked tuberculosis.

His real object, however, was to ask for information. For some years past he had been struck with the extraordinary widespread distribution of sclerostome infection in many districts in Derbyshire, and had seen very many cases with a friend whose practice lay in that county. So serious had it become that in some parts it was a matter of extreme difficulty to rear foals, although the infection was not confined to foals alone. Prof. Annett had done a considerable amount in studying the life-history of these parasites, which was now fairly well known, but the treatment of the infected animals was the point which agitated the minds of those who had the care of these animals.

Thymol was used with varying success, and he might say with great lack of success in many cases. What dose of Thymol was it safe to give? His friend had been giving about 30 to 60 gr. doses per diem. He would be glad to hear the experience of others in regard to the treatment of this parasitic condition.

Mr. Woods was of opinion, having had considerable experience of sclerostoma, that the only successful treatment was Thymol. He had no fear of giving dram doses to a yearling colt. He had not given more because he had been successful with that amount, but he referred to a friend who gives two dram doses with good success and without having any toxic effects whatever. The doses mentioned on the bottle are insufficient even in foals.

Mr. Munro instanced cases in which he had not seen much improvement when treated with one dram doses of Thymol, but which had made good recovery on two dram doses. He gave the Thymol in milk.

Mr. Edward's method of giving Thymol was to dissolve it in methylated spirit and add gum tragacanth. This made a good emulsion.

Mr. Norbury asked whether any member had experienced a mare having triplets. This had occurred in his practice. They were premature.

Mr. Hopkins was puzzled to account for two cases of strangles which had occurred in two successive winters. In the first year one horse out of five running together had the disease without the others contracting it, and in the second winter one out of four under exactly similar conditions. In regard to Mr. Norbury's question, he remembered that Mr. Laithwood had had a cow having five calves at a birth.

Mr. Dobie instanced a case of a horse picking up a nail in the hind foot at the point of the frog. He put in the orifice a stick of nitrate of silver about two inches in length and left it in, doing this daily for some days and then every other day. The horse made a complete recovery.

Mr. Allen reported a case of stoppage of the bowels in a horse. He got the bowels opened, but whenever the animal had solid food he showed symptoms of pain. He was again called in, and the horse had passed a portion of bowel about one foot long. The pain had left and there was recovery.

Mr. Munro gave the history of a mare that had peritonitis with perforation of the bowels and died.

Mr. Wolstenholme referred to the opsonic treatment. He wondered whether they could fortify their patients with a preparation of the particular organism which was causing the mischief. He had seen the history of a case of gonorrhœal rheumatism in the human subject which was treated in hospital on the old lines for ten weeks without success, then the opsonic treatment was adopted and the recovery was exceedingly quick.

Mr. Edwards alluded to an article on the same subject, commenting on the satisfactory results in a bullock in which the opsonic treatment was adopted.

Dr. Annett sent specimens of (1) suppuration of kidney of a sheep; (2) tuberculous kidney of a sow; (3) tuberculous udder of a sow; (4) miliary tuberculosis of the lung of a colt; (5) cirrhosis of liver of a horse;

(6) a case of avian tuberculosis; and (7) necrosis of the fat of a pig.

A vote of thanks to those bringing specimens, and to Mr. Munro for presiding, brought the meeting to a close.

The Measure of Damages—The Service of a Stallion.

This was an action brought by Mr. B. B. Sapwell, an agriculturist and breeder of racehorses, against Sir William Bass to recover damages for breach of a contract made by correspondence in December, 1907, and January, 1908, between the plaintiff and Lord Marcus Beresford as agent for the defendant. The contract was that Cyllene, a racehorse owned by the defendant, should in the season of the year 1909 serve one of the plaintiff's brood mares to be selected by the plaintiff for a fee of £315, to be paid at the time of the said service by the plaintiff to the defendant. In the summer of 1908 the defendant, without the consent of the plaintiff and without previous notice to him, sold Cyllene for £30,000 to go to South America. The plaintiff having protested by a letter of July 10, 1908, addressed to Lord Marcus Beresford, he replied that "Cyllene has never been advertised to stand as a stallion for 1909, and I merely took the sub. in case he did stand at my farm, but the horse has been sold, so neither you nor Sir William Bass are liable for anything." The plaintiff, in reply, said that he claimed a sum equal to the average profit he had made through having a mare served by Cyllene during the last four years. During those four years he had had four colts which had sold at £3,300. Upon that basis his loss came to 700 guineas. At the beginning of 1909 the plaintiff claimed fulfilment of the contract, which was repudiated by the defendant, and the present action was brought. In the meantime, however, the plaintiff arranged to minimize the damages by sending one of his brood mares named Dear Mary, which he had intended to send to Cyllene, to Cicero, a son of Cyllene, for a fee of £100. By Cicero, Dear Mary became in due course in foal.

The case was originally heard at Norwich, when it was found that there was a contract which had been broken. A brief report appeared in *The Times*, Feb. 1. The question of damages was adjourned for further consideration.

Sir F. Low, K.C., and Mr. Henlé were for the plaintiff; Mr. Hohler and Mr. Cababé for the defendant.

Mr. Justice Jelf, in the course of a written judgment, having stated the facts as above set out, said that he was desirous, if he properly could, to find some mode of legally making the defendant compensate the plaintiff; but the question of damages presented formidable and, to his mind, insuperable difficulties. The plaintiff had paid nothing and had incurred no expense. The suggestion made by Jervis, C. J., and Willis, J., in "Fletcher *v.* Tayleur" (17, C.B., 39) that the average profit made by the use of chattels not delivered under a contract should, by analogy with the interest on money not paid, be the amount of damages, had not been adopted as a separate rule, and would not in any event be applicable to the present case. The damages, if any, recoverable here would either have the estimated loss of profit or else nominal damages. The estimate could only be based on a succession of contingencies. Thus it was assumed that (*inter alia*) Cyllene would be alive and well at the time of the intended service; that the mare sent would be well bred and not barren; that she would not slip her foal; and that the foal would be born alive and healthy. In a case of this kind he could only rely on the weighing of chances; and the law generally regarded damages which depended on the weighing of chances as too remote, and therefore irrecoverable. It was drawing the line between an estimate of damage based on probabilities, as in "Simpson *v.* L. and N.W. Railway Co." (1, Q.B.D., 274), where Cockburn, C. J., said:—"To some extent, no doubt, the damage must be a matter of speculation, but that is no reason for not awarding any damages at all," and a claim for damages of a totally problematical character. He (Mr. Justice Jelf) thought the present case was well over the line. Having referred to "Mayne on Damages" (8th Edn., p. 70), he pointed out that in "Watson *v.* Ambergah Railway Co." (15, Jur., 448) Patteson, J., seemed to think that the chance of a prize might be taken into account in estimating the damages for breach of a contract to send a machine for loading barges by railway too late for a show; but Erle, J., appeared to think such damage was too remote. In his Lordship's view the chance of winning a prize was not of sufficiently ascertainable value at the time the contract was made to be within the contemplation of the parties. Further, in the present case, the contingencies were far more numerous and uncertain. Although the defendant must be taken to have known the plaintiff's general business object in making the bargain and his expectation of making a commercial profit, his Lordship did not consider that the plaintiff's suggested damage was the reasonable and natural result of the defendant's breach or that it could have been within the contemplation of both parties at the time the contract was made, according to the rule in "Hadley *v.* Baxendale" (9 Ex., 341) and other cases of the same kind. He therefore decided the case on the legal ground that there was no evidence of any legal damage arising from the breach of contract, and had there been a jury he would have so directed them. He would enter judgment for the plaintiff for nominal damages, which were all he was entitled to. They would be assessed at 1s. Having regard to the attitude taken up by the defendant and his agent justice would be done by ordering each party to pay his own costs.

Solicitors.—Ravenscroft, Woodward and Co., for Purdy and Holley, Norfolk; Richards and Parker.—*The Times.*

The Tetanus Bacillus in Intestine of Cattle.

For a considerable number of years it was accepted without question that the normal *habitat* of the tetanus bacillus was in the superficial layers of the soil, especially on cultivated ground. It was found, however, that the bacillus does not occur in the soil from forests and uncultivated land, but only in ground which has been well manured. This led to the suspicion that the manure might have something to do with the pretence of the bacillus, and eventually several observers succeeded in isolating it from the fresh fæces of various animals. These included the horse, ox, pig, dog, and cat. In 1908 Romer showed that tetanus antitoxin was present in the blood of 50 per cent. of normal cows over 2 years old. It was absent in younger animals. For some time it was uncertain whether the presence of the bacilli in the alimentary canal was constant or merely temporary, but within the past year Joseph has shown that the tetanus bacillus is a permanent inhabitant of the intestine in older cattle, and that it occurs with great frequency. Once it has gained entrance, change of feeding does not cause it to disappear. It may be assumed with some probability that the bacilli occasionally penetrate the intestinal wall and find their way to distant organs. Tarozzi has recently shown that tetanus spores can live for over three months in the liver or kidney in a latent condition, but are gradually destroyed. By artificial trauma he was able to induce these spores to germinate, and this led him to the conclusion that spontaneous tetanus might be due to the existence of spores in a latent condition, stirred into activity by some particular circumstances. Some such process as this, causing a slight production of toxin with a corresponding elaboration of antitoxin by the organism, is assumed by Romer to be the explanation of the presence of antitoxin in the blood.—*British Medical Journal.*

DISEASES OF ANIMALS ACTS 1894 TO 1903, SUMMARY OF RETURNS.

Period.	Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Counties Affected	Sheep Scab.	Swine Fever.	
	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Animals Attacked	Out-breaks	Out-breaks.	Slaugh-tered *
GT. BRITAIN. Week ended April 30	37	38			8	14		1	29	452
Corresponding week in 1909 ...	32	34			7	44	Essex 1	3	45	447
Corresponding week in 1908 ...	22	28			13	35		2	44	220
Corresponding week in 1907 ...	38	54			18	45	London 10	6	63	298
Total for 18 weeks, 1910	556	682			134	328	Middlesex 2	301	410	3484
Corresponding period in 1909 ...	517	705			222	883	Surrey 1	412	560	5219
Corresponding period in 1908 ...	431	598	3	112	281	967		608	599	3141
Corresponding period in 1907 ...	408	563			332	757		382	738	3769
Board of Agriculture and Fisheries, May 3, 1910.							Parasitic Mange (outbreaks)			
IRELAND. Week ended April 23	...	...	...	...	1	2	...	14	8	118
Corresponding Week in 1909 ...	...	...	...	...	...	...	2	2	...	23
Corresponding Week in 1908 ...	...	...	...	...	...	...	2	8	14	78
Corresponding Week in 1907 ...	...	...	...	...	...	...	1	2	...	81
Total for 17 weeks, 1910 ...	4	6	...	...	1	2	29	291	29	685
Corresponding period in 1909 ...	2	2	...	...	...	...	37	253	10	117
Corresponding period in 1908 ...	3	6	...	...	...	...	19	244	63	1206
Corresponding period in 1907 ...	1	3	...	...	...	...	40	147	43	892

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, April 27, 1910

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

The Tuberculosis Commission.

Mr. CHARLES BATHURST asked the President of the Local Government Board whether the Royal Commission on Human and Animal Tuberculosis, which was appointed on August 31, 1901, was still pursuing its investigations in reference to the communicability of bovine tuberculosis to human beings; and, if so, whether in view of the urgent importance of the questions referred to the Commission, especially in their bearing upon the production and distribution of milk, and of the fact that no report of the Commission had been issued since the Third Interim Report of January, 1909, he would urge the Commission to present a fourth interim or a final report with as little delay as possible. Mr. John Burns replied that he understand that it was not the intention of the Commission to issue any further interim report; it was now engaged in considering the results of the experimental investigations and drafting the final report, and hoped that it might be possible to present this in the course of a few months.

Streptococci in Milk.

During the course of the past ten years an ever-increasing amount of effort has been directed towards the attainment of a pure milk supply. The fact that milk may serve not only as a suitable medium for the growth of various bacteria but also as an efficient means for their transference has been abundantly recognised. Of especial interest at the present time is the association of milk with the summer diarrhœa of infants. It is but natural that the cause of this disease should have been sought for in the milk, but the numerous theories propounded on this question have without exception lacked substantial confirmation. In this connection the presence of streptococci in milk and the suitability of such infected milk as food have been of late the subject of many contradictory opinions. Numerous workers have found a high percentage of milks infected with streptococci. This was at first regarded as indicating the presence of mastitis in the cows, and it was held responsible for many of the inflammatory intestinal conditions in children. Petruschky in 1904 definitely assumed a causal relationship between the streptococci and infantile diarrhœa. He obtained the cocci from every sample of milk which he examined, and he maintained that they were pathogenic and the direct cause of diarrhœa. Shortly afterwards Schlossmann, and, later, Sieffert cast much doubt on Petruschky's conclusions. It was shown that these streptococci were non-pathogenic, but Heinemann demonstrated that they could be rendered pathogenic by passing through a rabbit. The latest pronouncement on the matter comes from Bachi, who, at the suggestion of Schlossmann, has conducted a lengthy series of observations on these streptococci. He has found them present in 75 per cent. of samples, and regards them as identical with Kruse's *Streptococcus lactis acidi*. It is a non-pathogenic organism, which can be differentiated from *Streptococcus pyogenes* by its morphology, and in particular by its tendency to form involution forms on solid media and on milk which is turning sour. He considers it is highly improbable that harm to children can result from its presence. There is the danger, however, which is not to be denied, that it may under certain conditions acquire pathogenic properties, but this danger can be avoided by proper precautions in milking and in keeping the milk cool. In only 2 cases out of 81 did Bachi find *Streptococcus pyogenes*, and in

one of those the sample came from a cow which had disease of the udder. The explanation of its presence in the other case was not obtained. Dr. Savage, however, in the annual report of the Local Government Board for 1908-9 has shown that even in the presence of actual mastitis in the cow the streptococci (*S. mastitidis*) are not pathogenic in man.—*Brit. Med. Journal.*

Prosecution by the R.C.V.S.

A summons at the instance of the Royal College of Veterinary Surgeons against Mr. George R. James was heard on the 29th April before Mr. de Grey at the South Western Police Court. Mr. Thatcher, the Solicitor to the College, attended to prosecute, and Mr. Wilkinson defended.

Mr. Thatcher stated that Mr. George R. James was a Registered Existing Practitioner and had obtained registration by the Royal College of Veterinary Surgeons in pursuance of Section 15 of the Veterinary Surgeons Act 1881, in other words, he was a person who had practised veterinary surgery for five years prior to the passing of the Act, and was therefore entitled to be put on a separate Register without having to pass any examination, and this was done in January, 1882. He further stated that to have entitled a person to be placed on the Register of Members of the College at that time it would have been necessary to have undergone three years study at some recognised Veterinary College and to have passed three professional examinations. The complaint against Mr. James was in consequence of a prosecution at the same Court on the 9th February last when two men were summoned at the instance of the Royal Society for the Prevention of Cruelty to Animals for working a horse in an unfit state, and the matter was adjourned until the 16th of the same month for veterinary evidence, when on that occasion a Member of the College was called in support of the complaint and another Member of the College and the defendant (James) were called in support of the defence, and in the course of his evidence the defendant was reported to have sworn that he was a Member of the Royal College of Veterinary Surgeons. This, the prosecution contended, was an offence under Section 16 of the Veterinary Surgeons Act, 1881, which enacts that any person not being a Fellow or Member of the Royal College of Veterinary Surgeons who takes or uses any name, title, addition, or description by means of initials or letters placed after his name, or otherwise stating or implying that he is a Fellow or Member of the Royal College of Veterinary Surgeons should be liable to a fine not exceeding £20.

Mr. Thatcher put in the Register, and called as evidence the Clerk of the Court who took the depositions and another witness, both of whom were quite positive that the defendant made the statement that he was a Member of the Royal College of Veterinary Surgeons.

Mr. Wilkinson argued in the first instance that the case did not come within the operation of Section 16 at all, inasmuch as there was no statement in writing and that it could not be proved that the defendant had anywhere either by letter, card, billhead, sign on door, or in fact in any other way had ever called himself a Member of the R.C.V.S., and that the prosecution must consequently fail on that ground. This was demurred to by the College Solicitor. Mr. Wilkinson then further stated that the defendant denied that he had ever said that he was a Member of the R.C.V.S., but that what he did say was that he was registered by the R.C.V.S. He called the defendant who swore to this in the box and adhered to it on cross-examination.

The member of the College who was the witness in the former case for the defence was also called, and he said that he heard the Defendant's evidence, but that he was sure he did not say he was a Member of the R.C.V.S.

Mr. de Grey dealt first with the legal question, which he decided in favour of the College. He then said that he thought the defendant might have made an innocent statement, and he did not think he intended to mislead the Court in saying he was a Member of the R.C.V.S., and he therefore, although he felt bound to convict, only fined the defendant 2/-, the costs of the summons.

At the Crumlin Petty Sessions on Monday, April 25th, before Messrs. Arthur Mussen, M.D., J.P., (in the chair); John Laird, J.P., Robert Suffern, J.P., and Wm. Fitzgerald J.P., William John Wilson, Crumlin, was prosecuted at the instance of the Royal College of Veterinary Surgeons, London, for having assumed the title of veterinary surgeon, he not being so qualified according to the Veterinary Surgeons' Act of 1881.

Mr. W. G. Maginess, solicitor, who conducted the prosecutions, having submitted a photograph of defendant's hall door showing a plate on which he (defendant) described himself as a veterinary surgeon, said that Mr. Wilson had called with him and produced a diploma which he obtained from the London College at Ontario. This, however, would not entitle him to practise in this country. He (Mr. Maginess) had every reason to believe the defendant had acted in ignorance of the law.

Chairman (to defendant): Could you not get your diploma transferred to the Royal College?

Defendant: I don't know.

Chairman: You should try and find out. The surgeons must be protected.

Defendant: I know that. I would not have done it only through ignorance.

Mr. Maginess said that under the circumstances, and as defendant pleaded guilty, he would only ask for a small fine.

Chairman: We'll fine him 10s. and costs, which is a mere bagatelle.

Mr. Maginess then applied for a guinea costs. Their worships granted him 10s.—*The Lisburn Herald.*

More About "Roaring."

Mr. Hannay, M.R.C.V.S., Kelso, has certainly shown "some little temerity" in penning his criticism on our statement that "according to Prof. Hobday's argument the so-called hereditary disease "roaring" can be cut out of the equine body as effectually as appendicitis can be cut out of the human body." After a considerable parade of his anatomic lore—in which we have no doubt he is very profound—and arguing that "roaring" is not a disease "but merely a symptom of one," he goes on to argue that by one particular method of operation—in which he is no doubt a thorough expert—"one removes the immediate cause of the roaring!" After this, what more does he want, when not only the symptoms of "roaring," but also "the immediate cause of the roaring," are cut out by the surgeon's knife, so that this "so-called hereditary disease" has been "cut out of the equine body as effectually as appendicitis can be cut out of the human body." As to his further argument, that in such an operation "a part of the organism" is removed, we never argued that stock got by a sire which had been so operated on "would be void of a corresponding part of its anatomy" any more than we would think of arguing that a shorthorn bull which had got his horns removed would, if put to a shorthorn cow, beget animals of a polled type. In regard to his "thirdly"—which fortunately for his argument is also "lastly"—we quite understand that veterinary surgeons who have been taught that roaring is a hereditary disease, and have never thought of examining that doctrine for themselves, would think it rank heresy to doubt that all stock got by a "roarer" would be liable in time to

develop into "roarers." Our argument, on the other hand, was that this so-called hereditary disease which can be cut out of the equine body with the surgeon's knife—even to the "immediate cause" as well as the "symptoms"—is not hereditary at all, but is an abnormal state which is largely accounted for by climatic conditions, by over-feeding, or by unsatisfactory environment. In proof of this contention we pointed to the uncontrovertible fact that the great horse Sir Everard, which was undeniably a roarer—such as Mr. Hannay and his friends would have condemned and "scrapped"—begot a race of thoroughly sound animals from which most of the leading prize-winners of the present day—such as Baron's Pride, Everlasting, Silver Cup, Baron o'Buchlyvie, Bonnie Buchlyvie, and hundreds of others—are descended. Has not Mr. Hannay "a great deal to learn as well as to unlearn" in regard not only to hereditary unsoundness but in regard to the humour of his idea that a hereditary disease can be cut out, root and branch, from any living organism.—*North British Agriculturist.*

Royal College of Veterinary Surgeons.

FELLOWSHIP DEGREE.

A meeting of the Board of Examiners for this Degree was held on May 4th, at 10 Red Lion Square. Five candidates entered for the examination, and all passed and obtained the Diploma. The following is a list of the successful candidates together with the titles of their respective Theses:

Blake, A.	"The Management of Slaughter-houses in the East.
Hamilton, D.	"Johne's Disease.
Turner, H. A.	"Equine Hæmoglobinuria."
Bryden, R.	"Laminitis."
Keall, T. J.	"Fœtal Dystokia."

The Examiners were Messrs. J. Malcolm, W. Hunting, and Prof. Macqueen; Mr. W. J. Mulvey being in the Chair.

Fred Bullock, Secretary.

ARMY VETERINARY SERVICE.

Extract from *London Gazette*,

War Office, Whitehall, May 3.

Territorial Force. Unattached List.

P. M. Evershed to be Vet.-Lieut. Dated March 19.

Extract from *Gazette of India*, Dated April 10.

Indian Civil Veterinary Department.

Maj. G. K. Walker, F.R.C.V.S., Chief Superintendent Civil Veterinary Department, Punjab, is granted 18 months combined privilege leave and furlough.

Mr. V. de V. H. Woodley, M.R.C.V.S., Superintendent Civil Veterinary Department, North Punjab and North-West Frontier Province, is appointed to officiate as Chief Superintendent during Major Walker's absence.

Mr. S. Carless, M.R.C.V.S., now under training in the Civil Veterinary Department, Punjab, is appointed to officiate as Superintendent during Major Walker's absence.

Mr. T. Rennie, M.R.C.V.S., second Superintendent Civil Veterinary Department, Burma, is granted privilege leave for two months and sixteen days in combination with furlough for six months.

CORRESPONDENCE.

HEREDITARY UNSOUNDNESS.

Sir,

The current copy of *The North British Agriculturist* contains a spirited defence of my criticism on the above which you were good enough to publish in your issue of 23rd April.

The writer of this article is evidently a firm believer in the dictum that "to attack is the best defence," so he damns with faint praise my "anatomic lore and operative expertness" although I never laid claim to either of these enviable qualities.

He refers also to the humour of my idea that a hereditary disease can be cut out root and branch, but I fear that his idea of humour is that of quality which called forth Sydney Smith expression about operations.

There is an operation commonly performed in human practice, that for cancer of the breast which runs in some families, wherein the disease is cut out "root and branch," yet this operation does not make the offspring of such a patient immune to cancer.

To his argument that roaring is not hereditary at all but is largely accounted for by climatic conditions, over-feeding, and environment, I maintain that these are only predisposing causes, and that without an adherent susceptibility of the tissue these conditions would not have any effect, else "roaring" would be more common that it is at present.

In proof of his assertion, he quotes the case of "Sir Everard," but surely he would not establish a law of heredity based on the observation of one case.

Again, the case quoted is of an animal kept purely for breeding and show purposes, and never was exposed to the conditions which he states are the direct cause.

If he had produced a record of the many geldings and work mares descended from the same strain, instead of breeding animals, more reliance might be placed on his so-called proof.

It is generally agreed that the thoroughbred is more liable to this disease, yet this animal is kept under ideal hygienic conditions.

Roaring, apart from the cases classed as hereditary, may also be the result of sequelæ following other diseases, such as strangles, but in these cases the disease is not hereditary, and the cause of Sir Everard's roaring may have originated in such a way.

Now my argument is that if roaring, apart from sequelæ to other diseases, is hereditary—and no proof has been brought forward yet to disprove that belief, no operation would have the slightest effect in causing the germ cell, which is the fundamental basis of heredity, to eliminate the susceptibility to the disease of the part corresponding to that so operated upon. In other words, that the operation, though it cures the disease in the present generation, does not retard its development in the future generation.

Since we both agree to differ as to what does and what does not constitute a hereditary disease, there is a way out of the difficulty, and as a means of attaining to that end, I will ask him to advocate, through the medium of his journal, the establishment of an experimental breeding station under the Board of Agriculture, the experiments to be conducted and reported on by members of the Highland and Agricultural and the Royal Societies, and representatives of the veterinary profession. This would of course entail much expense, but the money might be found if sufficient pressure were put on the Government by the Members for agricultural constituences. The results of such experiments would be of inestimable benefit to all concerned.

Trusting you will give this letter the desired publication.—I am, sir, yours faithfully,

David Hannay, M.R.C.V.S.

Pringle Bank, Kelso, May 3.

DIPHTHERIA IN THE DOG.

Sir,

I notice at the Lancashire V.M.A. meeting that Mr. Packman, of Bury, mentions having received an enquiry as to whether dogs suffer from diphtheria. If they do not suffer from the complaint they are certainly at times affected with a disease of the pharynx remarkably resembling diphtheria in clinical symptoms.

About three years ago I well remember treating three pug dogs, all young ones, for a complaint in which there were plainly visible thick whitish false membranes at the back of the throat. The dogs neither ate nor drank, but I did not see any nasal discharge. Of course bacterial and microscopic examination alone will enable one to say whether the organism is the same in the canine complaint as in that of human beings. The fact that I saw the disease in a class of dog which is often nursed by ladies and children and lives mostly in the house, renders a decision on the point rather important.

Hutyra and Marek in their pathology state that Gray, Symes, and Bell have all noticed severe inflammation of the pharynx with the formation of pseudo-membranes in dogs and cats. They also state that cattle, lambs, and swine may suffer from diphtheritic complications in the course of other diseases. In the cases I saw in the pugs the false membranes in the throat seemed to be the only trouble, and no other disease co-existed with them.—Yours truly,

G. Mayall, M.R.C.V.S.

PROFESSIONAL ETIQUETTE.

Sir,

Mr. Archer's excellent paper on the above subject has undoubtedly done a great deal of good.

Although large signs or boards on veterinary surgeons' shoeing and other premises are, to say the least, unsightly. I do not think this method of angular advertisement does very much financial harm to other practitioners in the same place. This display of huge signs frequently places the particular veterinary surgeon, in the eyes of the public, on a level with the proprietors of other blacksmiths' shops in the town.

In the Eastern Counties, the greatest breach of professional etiquette against which the duly qualified men have to contend is the continual covering of quacks by M.R.C.V.S.'s, and by registered men living in the same district.

If M.R.C.V.S.'s would refuse to do locum work for quacks either for their own benefit or on account of their employers, the quacks would eventually have to seek other means of getting a competence. It is also usual in these parts to have unqualified assistants and "running doctors."—Yours truly,

Horace L. Roberts, F.R.C.V.S.

100 Princes Street, Ipswich.

NEURECTOMIES.

Sir,

I see that Mr. Routledge agrees with me that median neurectomy gives the best results from the horse owners' point of view, and I agree with him that great care and discrimination has to be taken in picking out cases that median neurectomy will cure.

I think that when plantar or ulnar neurectomy is combined with median neurectomy to ensure a useful degree of soundness, that it is unfair to the buyer, as in my experience degeneration always takes place. I did six or seven together, and I know that in three cases the feet came off. The others being sold at once I did not know what became of them.

I call neurectomy a cure because it cures certain lamenesses, but in young horses blistering, or firing and blistering is generally resorted to at first, and that prevents the disease going on, and then unnerve them if not sound after the firing and blistering. But in some cases I do not fire or blister at all if a horse is over nine or ten years if age and suffering from a knee spavin or what I term a high knee splint or a bobbin bone, I always do median neurectomy; it always cures and I have never known the disease to go on at an alarming rate. But if the bones of the knee are ossified and a knee spavin exists as well, then median neurectomy could not cure, but I did it one case and the horse certainly went better.

I have never seen sloughing of the foot or degeneration take place after median neurectomy, nor fracture of the os suffraginis after the operation has been performed for bobbin bone. I refer to sesamoid lameness when a horse shows pain over the sesamoid region and knuckles slightly on the fetlock when being pulled up, and I have done plantar neurectomy for that and cured the horse, but if the inner sesamoid bone only is affected I do median. Sometimes in sesamoid lameness there is a slight bony swelling corresponding in position to the sesamoid bones.

When the sesamoid bones are badly affected there is severe knuckling of the fetlock, and I would not unnerve a horse in that state. I never unnerve a horse for chronic bursitis.

As I have said before, combined median and ulnar neurectomy is successful in removing lameness not capable of being removed otherwise. I agree with Mr. Routledge on that point, but in my experience degeneration always takes place. But if an owner asked me to make a horse sound which plantar by itself or median could not cure, I would divide the median nerve, and in six weeks time divide the plantar or ulnar nerve, and if the nerves unite again then sensation would come back, and sensation being cut off for a time the horse might be sound.

Mr. Routledge says every nerve develops a node or neuroma. I am not of his opinion as regards neuromas, for when a nerve develops a node or neuroma I believe it makes the horse go lame, as I cut one out and the horse went sound after the operation, and that was a median neuroma.

For navicular disease I apply the cocaine test over the plantar nerves; if horse goes sound I do plantar neurectomy. If unsound after the cocaine test I do median neurectomy, and then advise sale if not quite sound. But if the owner asks me to be certain to make the horse sound, and plantar neurectomy would not cure him, I would divide the median nerve, and if not cured I would divide the ulnar or external plantar, but would not take any portion of the nerve away, as if you do median and ulnar neurectomy together the foot always comes off.

I have never anæsthetised the median nerve so far, but there is no reason why it should not be done, and then I would be quite certain if median neurectomy would cure the navicular disease or not. I have done ulnar neurectomy in one case by itself, and horse was sound when it got up, for exostoses on the outside of the knee and outside of the fetlock.

In anterior tibial I have always divided the right nerve, and paralysis always follows. I kept one for two months and it trotted sound but knuckled slightly on the fetlock in turning, and the owner being tired of keeping it had it slaughtered, but I believe that a couple more months rest would have cured it. This operation was done for a very large hock, and it cured the lameness. Lameness arising from knee spavin, or what I term a high knee splint, is always cured by median neurectomy.

Post tibial neurectomy is sometimes successful for spavin, contracted tendon, and ringbone, and is always worth doing in aged horses. I have never known a horse to break down after that operation for contracted tendon. I never unnerve a horse for a sprained tendon—I treat him with cold water and then blister, or fire and blister if necessary. I did not know that a horse's foot was liable to come off after laminitis when plantar neurectomy was performed on him, but I do not unnerve a horse with dropped soles, nor for acute laminitis, but for chronic laminitis, and the horse goes sound afterwards, and as far as I know goes on just as well as if operated on for ringbone. The only reason that I could give for the feet coming off after plantar neurectomy is being pricked in shoeing or a bad suppurating corn not attended to, or a picked up nail. Malcolm Allan.

Communications and Papers received:—Messrs. G. Mayall, H. L. Roberts, D. Hannay. *Gazette of India, Ulster Gazette.*